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As I see

PREFABRICATED HOUSING

ONE of the questions which come into our office from all parts of the United States more frequently than any others is the outlook for prefabricated building. I am listing below a few observations on the situation as we see them in our organization.

During the entire recorded length of the housing industry it has followed a pronounced cycle. Due to the length of the cycle, few builders or material dealers have noticed its regularity or the extreme nature of its fluctuations.

Within comparatively recent times statistical data have become available which make possible the measurement of the building cycle. On the basis of the number of building bricks produced per capita in England and Wales, the building cycle has been charted from 1785 to 1845, showing a very definite cycle running from 16 to 18 years in length. Figures are available on a number of cities in the United States showing building activity from 1830 to the present. This material also shows a cycle of approximately 18 years in length, synchronizing with the real estate activity cycle which has averaged eighteen and a third years over a 150-year period. The largest number of one- and two-family units started in any one year in this country was 729,000 in 1925, and the smallest number was 81,000 (or about 11 per cent) in 1933. Few major industries show such a violent fluctuation.

Inasmuch as these fluctuations are caused by the change in the demand for housing, it is safe to assume that the prefabricated industry will be tied to this cycle.

The ability of the prefabricated housing manufacturers to stay aboard during such drastic rearing and plunging that characterizes the building cycle will depend on several things:

1. The amount of money tied up in land, plant, tools and investments. This will vary greatly throughout the industry; some prefab manufacturers operate in an old lumber shed with only the most elementary tooling, while others operate from large plants with tooling worth several million dollars.

2. The amount of money available as cash reserve. This amount will vary in almost direct proportion to the variations in capital investment. The small shoestring operator simply shuts up the shop when the demand drops off. The large manufacturer who depends on mass production quantity to stay in efficient opera-

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tion will have to redouble his marketing efforts to maintain his steady stream of orders or, when these efforts fail, will be forced to scale down his production to match the lower demand. In many cases this will result in less efficient manufacturing and will increase his costs. At this point, with his manufacturing costs increasing and demand dropping, he may be forced to trim his profits in order to compete with the individual conventional builder. During this trip down the cycle, wages and cost of material will probably keep close step with the dropping demand for his houses. This will afford him some relief, but it is doubtful that his income will be sufficient to pay a return on the idle machinery and plant space. It is quite possible that many of the larger manufacturers will find themselves in distress during this period of falling demand.

These conditions hold true in many other large-scale durable goods industries. As we have noted before, however, few if any other large industries are subject to such severe and prolonged periods of declining activity. The construction of a home at any given time is optional and postponable, and construction occurs in large volume only in periods when the general public has considerable confidence in the future. Because of the large amount of money involved in the purchase of a home and the difficulty of securing financing in unfavorable periods, building has a very exaggerated cycle.

During the peak year of our last building boom, 937,000 housing units were started. Of these, 729,000 were one- and two-family units, representing the bulk of the prefab's potential market. In the lowest year of our building activity, 93,-000 units were started. Of this total, 81,000 were one- and two-family units. During the years 1920 through 1928, 5,000,000 one- and two-family units were started, or an average of 555,000 for each year. During the years 1930 through 1936, 1,239,000 one- and two-family units were started, or an average of 177,000 per year.

It will be noted that during the years of high activity the average of 555,000 units was more than three times the average of 177,000 units started during the years of declining activity, and that the number of one- and two-family units started during the peak year (1925 - 729,000) was exactly nine times the number started during 1933, the bottom of the last cycle. It is also noteworthy that the low year (1933) was 54 per cent below the average for the slack period.

Although many estimates have been made regarding the potential backlog of postwar housing, no one knows how large this backlog actually is. The estimates by the experts range from 20 million new family accommodations built on the assembly line in the first ten postwar years, by a building material manufacturer with considerable enthusiasm, to four or five million for the postwar period, including all types of residential dwellings. Figures available to date indicate that in the neighborhood of 800,000 units were started in 1946. This is the largest volume of construction since 1927, when 810,000 units were started.

COMPETITION

Despite the unprecedented housing market, the years of technological research and merchandising plans, and the economies effected through mass production, practically all prefabricated houses cost more per cubic foot than conventional

houses generally considered comparable. It may be that when materials begin to flow more smoothly and abundantly to the prefab industry, mass production techniques will pull the costs down considerably. On the other hand, before the war when building material and labor were abundant, prefab manufacturers with 20 and 30 years of experience failed to offer any serious price competition to the individual contractor. Then, too, a steadier flow of materials will also enable the conventional builder to lower his construction costs.

There is a limit to the economies that can be effected by prefabrication. For instance, land development cost, street improvement and mortgage cost, are items of expense that cannot be lowered at the factory. To these items of expense that are common to both conventional houses and prefabricated houses, must be added the greater marketing expense of the prefabs.

A great deal has been said regarding the advantages of mass buying which will accrue to the prefabricator. This advantage is also available to the large-scale conventional builders, many of whom buy their materials in carload lots. These operators clear acres of ground with rented power equipment, build hundreds of houses at one time, pre-cut their lumber with power saws and apply mass production methods in dozens of places with very little increase in overhead or capital investment.

Thus we see that the three principal problems facing the prefabrication manufacturer are:

1. Marketing and merchandising. In order to win their share of business in the following years, they must convince the home-buying public that their products are not just quickly built temporary housing but are solidly-constructed, well-designed homes. I think that prefabricators as a rule have not stressed this sufficiently in their advertising copy. A well-designed and well-built prefabricated house in my opinion has many advantages over a conventional building.

2. They must market their product effectively enough to assure a dependable supply of new orders in good times and bad in order to pay a return on their capital investment. No mass manufacturer can operate efficiently in a market with the tremendous fluctuations characteristic of the construction pattern.

3. They must operate efficiently enough to take full advantage of their mass production techniques, in order to offset public inertia to new ideas increasing the advertising and selling costs. Transportation costs limit the area which can be covered by any one plant.

As stated before, all three of these problems do not apply equally to all prefabricators. They will apply to the large wide-scale operator. The small local lumber yard, prefabricating only wall, floor and roof panels and selling locally, has no transportation costs and very little capital investment. Therefore, its problems will be primarily those of marketing. As the complexity of operation increases, so will the importance of the basic problems.

Of course, now and during the next year or two, the house manufacturers will be able to sell nearly everything they can produce, but once the edge is off the

housing shortage (and this MAY come with rather dramatic suddenness), each prefab manufacturer must decide how much business he can get in a free and dropping market, and whether this volume will justify his continued efforts in the field. Many will drop out of their own accord after a long solemn look at the future. Others will wait too long and will be shoved out of the market by the continued fall in the prices people will pay for houses. A few will be successful in dropping their production cost of salable units and will remain in throttled-down production during the period of building inactivity. It is these few who will form the nucleus of the prefabricated housing industry when it actually comes of age during the next building boom, some 18 to 20 years hence.

It is my opinion that in this next building boom some type of prefabrication will be the major factor in the boom. This may consist of entirely prefabricated buildings or it may develop into buildings built almost entirely of prefabricated parts. My only quarrel with the prefabrication enthusiasts has been on the speed with which prefabrication would become the dominant factor in residential building.

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